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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	

To: The Commission

JOINT COMMENTS OF BELL ATLANTIC[1] AND NYNEX[2]

Use of proxies to help determine the costs of providing service is always a poor substitute for using actual costs. In this proceeding, the Commission has not attempted to determine whether actual service costs can be calculated and reported. Therefore, the Commission should suspend this proceeding and investigate whether and to what extent individual exchange carriers can determine and report their actual service costs.[3] Only if some companies cannot provide that information should proxy models be used to determine universal service costs.

If the Commission decides, nonetheless, to adopt a proxy model to calculate universal service support, the Commission should not model a hypothetical network that has never been built and may never be built. To the greatest extent possible, the Commission should

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[1] The Bell Atlantic telephone companies are Bell Atlantic-Delaware, Inc.; Bell Atlantic-Maryland, Inc.; Bell Atlantic-New Jersey, Inc.; Bell Atlantic-Pennsylvania, Inc.; Bell Atlantic-Virginia, Inc.; Bell Atlantic-Washington, D.C., Inc.; Bell Atlantic-West Virginia, Inc. ("Bell Atlantic").

[2] The NYNEX telephone Companies are New York Telephone Company; and New England Telephone and Telegraph Company ("NYNEX").

[3] Those costs could be compared to calculated benchmark rates to ascertain the amount of high-cost funding that a given company requires to retain affordable rates.

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rely on the local exchange carriers' actual network configurations to develop a model of forward-looking costs of providing universal service. Assumptions should be used only where actual data cannot be obtained. Those assumptions should be based on realistic representations of the carriers' network engineering practices. Wherever possible, a model should allow permit use of data concerning actual network configurations in a given universal service area, and not employ fixed assumptions leading to a hypothetical network architecture.

In the attachment, Bell Atlantic and NYNEX provide specific comments on the first set of issues that the Commission designated in the Further Notice.[4] The attached comments address the platform design of switching, interoffice trunking, signaling and local tandem components.[5]

Respectfully Submitted,

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[4] ***See Further Notice of Proposed Rulemaking***, FCC 97-256 (rel. July 18, 1997).
[5] ***See id.*** at ¶¶ 121-141.

III.C.3 & 4 platform -- Switching and Interoffice Facilities

Response to paras. 121-122. We concur with the Commission that host and remote switches should be included in any model of universal service costs. BA/NYNEX deploys host/remote switches where they are more cost-effective than stand-alone switches, taking into account a number of factors, such as acquisition cost, maintenance costs, size of the serving area, growth rates, contract prices, etc. The best way to incorporate host/remote switches into a model is to use the actual locations where the LECs have deployed such arrangements.

If the Commission decides, nonetheless, to use an algorithm to assign host/remote switches, it should adopt an econometric model that would determine which technology would be more effective in a given office based on a traditional cost-benefit analysis. This would require a comparison of the net present value of the revenues and costs associated with deploying host/remote arrangements vs. stand-alone switches. The econometric model should identify the wire center characteristics that are correlated with the use of host/remote switches to predict deployment patterns. Finally, the Commission should seek cost data from switch vendors to identify the differences in costs between host switches and remote switches.

Beyond the issue of host/remote switches, the Commission should incorporate multiple switch technologies in any switch cost proxy model. Fixed and line costs of a switch vary between vendors and should be reflected in the model's cost development.

The model can be designed with multiple algorithms to permit input of fixed and line costs for each switch technology. A cost-benefit analysis using net present value concepts, as stated above, can be used in developing an algorithm for deployment of each switch technology.

Response paras. 123-124. The Commission should examine LEC switch deployment to determine the number of switches that are necessary to serve a particular area. Therefore, the model should allow the LECs to input the numbers of switches and models of switches in each end office. If the Commission decides to use an algorithm to project switch deployment, we concur with the Commission that more than one switch should be assigned by the cost model when the capacity constraint for the type of switch technology used in the model for a particular area is exceeded. Assigning more than one switch to a wire center should reflect actual forward-looking techniques currently used by LECs when deciding whether to purchase a new switch to meet future demand or to add capacity to an existing switch.

The Commission should include multiple switch technologies in the model with vendor-defined capacity constraints. Line concentration ratios and Administrative Fill Factors (AFF) should be added to the capacity constraints. Line concentration ratios reflect the number of lines that can be used at the same time given the output capacity of the switch. Actual line concentration ratios have become significantly lower in the last few years as a result of increased holding times due to Internet access, telecommuting,

bulletin boards, data transmission, etc. The AFF reflects the percentage of lines that can be assigned to end users on a given switch while maintaining the ability to meet additional demand and to use lines for testing, administration, etc. Hatfield 3.1 uses an AFF of 98 percent, which is higher than the BA/NYNEX AFF of 95 percent. An AFF higher than 95 percent could jeopardize a LECs' ability to respond to changing market conditions and to maintain service quality in the face of increasing and unexpected demand.

Response to paras. 125-132. The Commission should rely upon actual booked LEC switch costs as an input to the proxy model. However, the data produced by the staff's analysis of LEC-reported depreciation studies produces costs per-switch and per-line that are significantly below the LECs' actual switch costs. BA/NYNEX cannot determine, at this time, the reason why the staff study produces such low costs, because the staff has not explained how it calculated those figures. It is clear, however, that these data need to be re-examined to avoid a substantial underestimate of LEC switch costs. As an alternative to the use of actual booked LEC switch costs, as discussed in paragraph 132, the Commission should ask the LECs to submit cost studies of the current costs of purchasing and installing switches.

The Commission should include the cost of installing additional line capacity to an existing switch ("growth lines") in its model. In many cases, adding growth lines to an existing switch is the correct economic choice even though the cost per-line for

additional lines on installed switches is more than the cost per-line for a newly-installed switches. Analyzing the present value of the costs and revenues associated with newly installed switches and additional lines per wire center may give some insights into what algorithm might be established to predict this technology choice. By selectively using heavily discounted prices for new switches and by assuming that a local service provider would instantly install all of the switching capacity it needs to serve all demand, the Hatfield Model produces costs that are different than the forward-looking local switching cost that operating telephone providers must incur to efficiently serve their customers. This approach ignores the fact that the appropriate and efficient course for LECs to follow to serve demand frequently is to buy additional lines for installed switches, not always to buy new switches.

Response to paras. 133-137. BA/NYNEX agree that it is economically appropriate and efficiency-maximizing to recover non-traffic sensitive (NTS) costs through flat charges and to recover traffic sensitive (TS) costs through usage charges. This provides for efficient utilization of telecommunications resources because consumers are given accurate pricing signals. Customers will marginally consume only to the extent that the marginal benefits outweigh or are equal to the marginal costs, thus maximizing economic efficiency. Therefore it is proper to divide switch costs into the line-side port and usage costs.

BA/NYNEX agree with the Commission that all of the line port costs should be included in the universal service fund model, since the entire line (including the port) supports the provision of universal service. We also agree that the usage portion of switch costs in the fund should be based on the percentage of switch usage that the Commission will decide to include in the definition of universal service.

Response to paras. 139-141. BA/NYNEX have two comments regarding the accuracy of the Hatfield 3.1 model's inter-office transport algorithm.

First, the Hatfield model does not include the cost of the umbilical between the host and remote switch, because the model assumes that all switches are stand-alone. The model assumes that offices that contain remote switches instead contain stand-alone switches that are on a fiber ring if the office serves more than 5,000 lines. By including remote switches in the model, the Commission can more accurately estimate the IOF costs between host and remote switches.

Second, the Commission should include the impact of providing Local Number Portability on the common channel signaling portion of the network. This will require adjustments to the default parameters for the Hatfield 3.1 Model for ISDN User Part (USUP) messages, Transaction Capabilities Application Part (TCAP) messages, and the percent of calls requiring TCAP generation. The Signal Control Point default investment per transaction per second should also be reviewed.

We concur with the Commission's finding that BCPM's IOF costs are not adequate. The model employs a simple multiplier that does not take into account the

greater distance between wire centers in the more rural areas, which requires greater amounts of cable and structure investment.

CERTIFICATE OF SERVICE

I hereby certify that copies of this pleading were mailed this date, first class postage prepaid, upon the persons listed on the attached service list.

Joseph Di Bella

Dated: August 8, 1997

APPENDIX B
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